

AMENDMENTS TO THE CLAIMS

1. (currently amended) A space division multiple access (SDMA) cellular radio telecommunications network, in which in use physical channels are reused in the same cell, two reused channels on the up link being differentiated by a time shift between them, wherein the time shift is longer than the propagation delay on each of the reused channels so as to prevent simultaneous arrival of signals on reused channels.

2. (original) A network as claimed in claim 1, wherein the reused channels use a common clock signal.

a1 3. (original) A network as claimed in claim 1 or 2, in which timing advance information for each base station reusing a channel is transmitted on the down link.

4. (original) A network as claimed in claim 1 or 2, wherein the reused channels all use the same signature.

5. (original) A network as claimed in claim 1 or 2, including a master base station and a co-located slave base station, wherein the master base station generates a common reference clock and the slave base station uses a shifted reference clock to send time shift information to the mobiles.

6. (original) A network as claimed in claim 1 or 2, a base station having two receivers operating with mutually shifted time references.

7. (canceled)

8. (original) A network as claimed in claim 1 or 2, wherein the time shift is approximately equal to the guard interval.

Serial No. 09/737,640

9. (currently amended) A method of operation a of an space division multiple access (SDMA) cellular radio telecommunications network, in which in use physical channels are reused in the same cell, two reused channels on the up link being differentiated by a time shift between them, the time shift is longer than the propagation delay on each of the reused channels so as to prevent simultaneous arrival of signals on reused channels.

10. (original) A method as claimed in claim 9, wherein the reused channels use a common clock signal.

11. (previously amended) A method as claimed in claim 9 or 10, in which timing advance information for each base station reusing a channel is transmitted on the down link.

12. (previously amended) A method as claimed in claim 9 or 10, wherein the reused channels all use the same signature.

13. (original) A method as claimed in claim 12, wherein a master base station generates a common reference clock and a co-located slave base station uses a shifted reference clock to send time shift information to the mobiles.

14. (original) A method as claimed in claim 13 wherein two receivers at a base station operate with mutually shifted time references.

15. (canceled)

16. (original) A method as claimed in claim 9 or 10, wherein the time shift is approximately equal to the guard interval.

17. (original) A protocol for carrying out all the steps of the method of any of claims 9 or 10.

18. (original) A computer program for carrying out all the steps of the method of any of claims 9 or 10.
